



OLED Collaboration

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Agenda

- OLED Association Highlights
- Next Generation Lighting Alliance Highlights
- OLED Collaboration MOU
- Next Steps

OLED Association What Is It?

OLED-A provides a forum for the interchange of technical and market information. Our membership includes companies involved in small-molecule OLED technology and polymer technology (PLED or light-emitting polymers). OLED-A serves its membership by fostering the more rapid development of OLED technology and OLED products; serving as a resource on OLED markets and products for media and investors; functioning as a catalyst in the development of standards for OLEDs; and providing a forum to promote and market OLED technology products.

OLED Association -- Major Activities

Challenges

- One of the early challenges facing the industry is marketplace visibility. The new technology will be competing with technology that dominates the display and solid state lighting markets. OLED-A is a source of information to the media and to the eventual consumers of OLED products

OLED Standards

- The OLED-A founders realize there is a unique opportunity to invest in their industry, and have launched the OLED Standards program. The purpose of the OLED International Standards program is to help to ensure open markets and lower OLED manufacturing costs.

Voice of the Industry

- The OLED industry is expected to grow in size and importance and should change the viewing experience for commercial and consumer users while lowering energy use. As the voice of the industry, OLED-A represents the collective interests of its membership, and is an advocate for the industry in the areas of public policy, environment, market creation, workforce development and investor relations.
- Today, the technologies created by OLED members are applicable to a number of related industries, such as flat panel display, solid state lighting and organic electronics. Accordingly, OLED-A will help to spread the word and become a forum for both advancing the technology and expanding its markets.

Government Relations

- The Association promotes the industry at the local, state and national level to ensure that legislation and funding is available to significantly boost government programs for the development of OLED technology. The program includes an outreach and engagement strategy for the upcoming year that focuses on increasing and protecting the OLED programs in the next budget cycle.

Members

**Applied Materials, Inc.
CDT
Corning, Inc.
eMagin
EMD (Merck)
Hodogaya
Idemitsu Kosan
IGNIS Innovation Inc.
Kateeva
LG Display
Novaled
PPG Industries
RiTdisplay
Samsung Display
Silicon Works
Sunic System
Trovato, Mfg.
Universal Display Corporation**

OLED Association - Structure

Board Members

Corning - Kevin Gahagan, Ph. D., Strategic Technology Project Assessment

eMagin - Amal Gosh, Senior VP

Ignis Innovation - Peter Monsberger, CEO

LG Display - Joosoo Lim, GM of Strategic Technology

Novald - Gildas Sorin, CEO

Samsung Display - Brian Berkeley, SVP of OLED Development

Universal Display – Mike Hack, SVP & GM, OLED Lighting and Custom Displays,

Senior Vice President, Ex-officio of CDT - David Fyfe, Ph. D.

OLED-A - Barry Young, Managing Director

OLED Association - Structure

Principals

- **Barry Young**

Barry Young is CEO and Managing Director of the OLED Association, where he solves industry-wide issues, such as the development of standards for the OLED display and lighting industries. He also serves as CEO of Young Market Research (YMR) and is its primary-lighting analyst. He works with and supports the leading OLED manufacturers, tool makers and material suppliers for the entire food chain. He lobbies for the industry and develops forecasts of material usage, display shipments and revenue and lighting shipments and revenue. A founder of DisplaySearch, Young is one of the leading authorities on OLEDs and flexible displays, and during his tenure authored DisplaySearch's OLED, flexible-display, small/medium-display and technology reports. Before joining DisplaySearch, Young was CEO and president of OWL Displays, where he co-developed innovative driver technology for amorphous silicon (a-Si) and polysilicon (p-Si) TFT LCDs, and was awarded key patents for driving low-temperature polysilicon TFT LCDs. Before OWL, he was vice president and general manager of Tandem's integrity system division. He has also served as managing partner at Booz Allen & Hamilton, executive vice president at Wells Fargo Bank, senior vice president at Citibank and president and CEO of Lexar, an early developer of an all-digital PBX.

- **Sung Eun Kim**

Sung Eun Kim joined the OLED Association as an Associate Director. Sung recently returned to Austin, Texas from South Korea, where she worked for Magna Chip as a Strategic Marketing Leader in their Flat Panel Display Driver IC Division. Sung previously worked at DisplaySearch, where she was a Senior Analyst. Sung will be utilizing her language and research experience on conducting and collecting information from OLED Display and Lighting Manufactures in terms of market research.

Next Generation Lighting Industry Alliance What Is It?

- **Alliance of for-profit corporations formed to accelerate Solid State Lighting (SSL) development and commercialization through government-industry partnership**
- **Charter – Support of Inorganic and Organic based SSL:**
 - **Public Advocacy for SSL and Next Generation Lighting Initiative**
 - **Promotion and support of DOE's ongoing assessment of SSL potential, the state of SSL technology, and DOE's SSL R&D Program (we work to be a good partner today)**
 - **Facilitation of communication between NGLIA members and other parties with a substantial interest in SSL and the Next Generation Lighting Initiative**

Next Generation Lighting Industry Alliance -- Major Activities

- **Providing input to DOE workshops and roundtables**
- **At DOE's discretion, nominating potential evaluators and participating in technical evaluations for research projects in DOE's SSL Core Technology Program**
- **Encouraging development of metrics, codes, and standards, and providing input for voluntary DOE deployment programs such as Lighting Facts™**
- **Planning and promoting outreach activities by NGLIA members for general lighting applications of SSL**
- **Conducting economic/employment survey**

Members

3M
Acuity Brands Lighting
Applied Materials, Inc.
Bayer MaterialScience, LLC
CAO Group Inc.
Corning, Inc.
Cree Inc.
Eastman Kodak Company
GE-Lumination
LSI Industries
Luminus Devices, Inc.
OSRAM Sylvania Inc.
Philips Solid-State Lighting Solutions
QuNano, Inc
Ruud Lighting, Inc.
Universal Display Corporation

The Next Generation Lighting Industry Alliance - Structure

- **Separate from, but managed by NEMA; no NEMA membership required**
- **All members have one vote on Board of Directors**
- **BOD annually elects Chair and Vice Chair**
 - 2011 Chair: Keith Cook– Philips
 - 2011 Vice Chair: Jeff Quinlan – Acuity Brands Lighting
- **Annual dues set to cover public advocacy expenses + NEMA administrative & coordination expenses – divided equally among member companies**

The Intent of Collaboration

- Goals
 - Be the recognized voice for the OLED General Lighting Industry in the U.S.
- Activities
 - Facilitate communication within and outside the group
 - Promote OLED lighting industry in the U.S.
 - Assist in communicating requirements for OLED lighting standards
 - Ensure the needs of the industry are well understood by Congress, DOE and the OMB
 - Assist with priority setting for intercompany activities related to DOE efforts (R&D, Product Development, Manufacturing & Market Development)
 - Produce an annual report on the progress made by the U.S. OLED industry

The Intent of Collaboration (Cont.)

- Membership – must have a presence in the U.S. and be a participant in the U.S. supply chain or be otherwise linked to the U.S. OLED lighting industry
- Organization
 - Board to be composed of 5-7 members
 - Corporate Organization – Not for Profit LLC
 - Chairman of the Board – Barry or Keith
 - CEO – Barry or Keith
 - Staff as required
- Fees
 - No fees for NGLIA and OLED-A members
 - Fee to be determined for non-NGLIA or OLED-A members
 - From time to time to support the group's activities some assessments to selected members may be required

Next Steps

- Finalize MOU
- Execute
 - Establish communication forums
 - Advocate for OLEDs
 - Establish OLED standards roadmap
 - Work closely with DOE SSL activities
- Others?